

PROCESS FOR PRODUCING ALUMINUM OXIDE FILMS AT LOW TEMPERATURES

Abstract of the Disclosure

5 A process for producing aluminum oxide thin films on a substrate by the ALD
method comprises the steps of bonding a vaporizable aluminum compound to a growth
substrate, and converting the bonded organoaluminum compound to aluminum oxide.
The bonded aluminum compound is converted to aluminum oxide by contacting it with
10 a reactive vapor source of oxygen other than water, and the substrate is kept at a
temperature of less than 190°C during the growth process. By means of the invention it
is possible to produce films of good quality at low temperatures. The dielectric thin
films having a dense structure can be used for passivating surfaces that do not endure
high temperatures. Such surfaces include, for example, polymer films such as organic
electroluminescent displays. Further, when a water-free oxygen source is used, surfaces
15 that are sensitive to water can be passivated.

20 W:\DOCS\ANM\ANM-2250.DOC:cc
101001